

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 3-8, and 10-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engel-US Patent # 2,911,291. As to claim 1, Engel discloses a filtering and processing apparatus including an elongate cylinder (rotative hollow shaft 13) which inherently rotates about its longitudinal axis, vanes 67 extending away from the shaft and coated with impurities absorbing material such as charcoal 72, see fig. 1-4 and col. 2, lines 22 et seq. Further, it is noted that Engel does not refer to the apparatus as a "probe". However, it is noted that "probe" is merely found in the preamble and the body of the claim lacks any "language referring back to or drawing life from the preamble designation of the probe. Therefore, the designation of a probe is not being afforded the effect of a distinguishing limitation and it would have been obvious to one of ordinary skill in the art at the time of the invention to have named the apparatus as a probe since it extracts analytes from a sample. Further, Engel does not specifically designate that the cylinder is arranged "to move longitudinally". However, since it is indicated that the hollow shaft "is mounted on bearings 26 and 26' to base 11 and cover 14 and "accurately positions...the turbine", it would appear that the shaft is arranged for some degree of *longitudinal* movement for this mounting i.e. the assembly would require longitudinal movement into the cylinder 12 since there is a recitation of mounting and positioning within the sample container. Therefore, it would have been obvious to one

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of ordinary skill in the art at the time of the invention to have indicated that the hollow shaft 13 is *arranged to move longitudinally* into the cylinder 12 in order to assemble the unit by inserting the shaft 13 into the cylinder via longitudinal movement which would then “enable the cylinder to be immersed in the sample” i.e. inlet gases E. As to claim 3, since liquid is supplied through 92, it appears the area of contact is maximized. Note no distinguishing apparatus feature defines how the area is maximized. As to claim 4, the filter 66 can be the extracting element and the rotative hollow shaft is arranged to be rotated in the sample. As to claim 5, note fig.2 where the vanes appear as impellars. As to claim 6, it appears there is a turbine 30. As to claim 7, note figs. 1 and 2 depicting the vanes as blades. As to claim 8, the vanes are coated with charcoal, note col. 3, lines 32-41. As to claim 10, note the perforations 95. As to claim 11, cylinders 12 or 20 can be a sheath. As to claim 12, note the rotation causes movement relative to the sheath and somewhat elevation along with decent. As to claim 12, note charcoal 74 surrounding the shaft 13. As to claim 14, note heating elements 33. As to claim 15, note housing (cylinder 12) with inlet 28 and outlet 24. As to claim 16, note figs 1 and 2 which appear to form a spiral thread. As to claim 17, Engel employs charcoal and substitution with any other impurities absorbent of known absorbents is considered to have been a matter of design choice obvious to one of ordinary skill in the art at the time of invention based on the sample being collected. As to claim 18, filter element 48 can be considered a sparger since they diffuse with metal wires. Usage of glass frit is a well-known alternative filter element to the usage of metal wires. As to claim 19, this appears to be an intended usage without defining a limitation for accomplishing this

intended usage. As to claim 20, note the vane shape. As to claim 21, note rejection above with regard to claim 1 and further note sheath (cover 14) within which the shaft 13 is mounted obviously via longitudinal movement within the cover 14 for further immersion in the sample.

3. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pawliszyn-US Patent # 5,496,741. As to claims 21 and 22, Pawliszyn discloses a device for increasing analyte concentration in an sorbent including sample 4, sheath (housing 22), elongate cylinder portion (hollow fiber 20) where the elongate cylinder portion is arranged to move longitudinally and inherently rotatively via cylindrical plunger 27, such that the fiber 20 is able to be immersed in the sample 4, and the fiber having a polymer 8 which appears as a vane in the figure and the fiber is hollow allowing gas to flow therethrough, see fig. 2 and col. 2, lines 30 et seq. It is noted that Pawliszyn fail to specifically teach provision of a vane with a coating on it. However, in the embodiment of fig. 1, Pawliszyn teaches usage of a polymer 8 *with* a coating 12, see col. 2, lines 10-2. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have realized that usage of a polymer with a coating would be an obvious variation to a polymer coating in order to shape the coating to increase the surface area of contact since Pawliszyn teaches usage of either expediency.

Response to Arguments

4. Applicant's arguments filed 9/10/10 have been fully considered but they are not persuasive. Applicant has argued that Engel does not teach a probe arranged to move longitudinally to enable the cylinder to be immersed in the sample. Such an argument is

not found persuasive because these claims do not specify how the probe is arranged to move longitudinally such that the reference to Engel meets the claimed limitation because in order to mount and position the probe/shaft in the cylinder 12, it must move into it longitudinally given the drawing depiction.

5. Applicant's arguments with respect to claims 21 and 22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NASHMIYA FAYYAZ whose telephone number is (571)272-2192. The examiner can normally be reached on Tuesdays and Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hezron Williams/
Supervisory Patent Examiner, Art
Unit 2856

/N. F./
Examiner, Art Unit 2856